

Supplemental Table 1 Comparison of the baseline characteristics of chronic cardiorenal and control groups

Characteristic	Cardiorenal type 2	Control 1 (stable HF)	Cardiorenal type 4	Control 2 (stable CKD)
N	128	3072	677	2239
Age (years)	59 ± 15	62 ± 15	73 ± 12¶	71 ± 13
Male sex	63 (49%)	1746 (57%)	301 (45%)	1037 (46%)
African American	16 (13%)	326 (11%)	65 (10%)	217 (10%)
Hypertension	70 (55%)	1753 (57%)	393 (58%)¶	1468 (66%)
Diabetes mellitus	30 (23%)	761 (25%)	198 (29%)¶	516 (23%)
CAD	62 (48%)	1763 (57%)	369 (55%)¶	1064 (48%)
ACEI or ARB	43/121 (36%)	1299/2889 (45%)	268/601 (45%)	857/2050 (42%)
β-blocker	76/121 (63%)	1963/2889 (68%)	351/601 (58%)	1109/2050 (54%)
Statin	47/121 (39%)†	1431/2889 (50%)	286/601 (48%)	944/2050 (46%)
Loop diuretics	72/121 (60%)	1546/2889 (54%)	152/601 (25%)¶	387/2050 (19%)
Spironolactone	9/121 (7%)	157/2889 (5 %)	11/601 (2%)	36/2050 (2%)
Aspirin	61/121 (50%)	1691/2889 (59%)	306/601 (51%)¶	929/2050 (45%)
Warfarin	25/121 (21%)	612/2889 (21%)	95/601 (16%)¶	251/2050 (12%)
Creatinine (mg/dl)	0.83 (0.70-1.01)	0.87 (0.75-1.01)	1.33 (1.12-1.68)¶	1.30 (1.11-1.56)
eGFR (ml/min/1.73m ²)	86 ± 17	85 ± 16	43 ± 13¶	46 ± 12
UACR (mg/g)	174 (9-1211) (n=12)	22 (10-83) (n=152)	68 (14-499) (n=56)	31 (12-180) (n=215)

Hb (g/dl)	11.5 ± 2.1 (n=70)†	12.4 ± 2.2 (n=2098)	11.8 ± 2.1 (n=320)¶	12.1 ± 2.0 (n=1232)
Albumin (g/dl)	3.4 ± 0.7 (n=113)†	3.8 ± 0.6 (n=2498)	3.9 ± 0.6 (n=529)	3.9 ± 0.6 (n=1648)
HbA1c (%)	7.3 (6.0-8.3) (n=7)	6.1 (5.7-7.4) (n=120)	6.7 (6.1-7.8) (n=34)	6.2 (5.7-7.1) (n=85)
BNP (pg/ml)	273 (123-709) (n=50)	244 (83-547) (n=864)	216 (90-510) (n=113)¶	134 (58-290) (n=199)
Preserved EF	63/114 (55%)	1515/2855 (53%)	457/621 (74%)¶	1781/2113 (84%)
LVEF (%)	55 (40-60) (n=114)	55 (35-60) (n=2855)	55 (50-60) (n=621)¶	60 (55-60) (n=2113)
LVd (cm)	4.9 ± 0.9 (n=111)	5.0 ± 1.0 (n=2597)	4.6 ± 0.8 (n=557)¶	4.4 ± 0.7 (n=1759)
LVMi (g/m ²)	97 (76-108) (n=32)	102 (80-129) (n=927)	105 (81-126) (n=129)¶	91 (75-110) (n=473)
LAd (cm)	4.1 ± 0.8 (n=89)	4.1 ± 0.8 (n=2509)	4.1 ± 0.8 (n=431)¶	3.9 ± 0.7 (n=1720)
PAP (mmHg)	30 (21-40) (n=72)	26 (20-34) (n=1948)	28 (23-36) (n=406)¶	25 (20-31) (n=1380)
RAP >6 cm H ₂ O	8/32 (25%)	184/1190 (16%)	13/170 (8%)	39/702 (6%)
Preserved RV function	78/92 (85%)	2149/2539 (85%)	503/537 (94%)¶	1702/1757 (97%)
Dilated RV	27/103 (26%)†	410/2665 (15%)	45/551 (8%)	135/1799 (8%)
RV hypertrophy	1/45 (2%)	63/1361 (5%)	16/266 (6%)¶	25/1005 (3%)
RWMA	5/56 (9%)	303/1441 (21%)	47/362 (13%)¶	100/1334 (8%)

HF, heart failure; CKD, chronic kidney disease; N, number of patients in each group; CAD, coronary artery disease; ACEI, angiotensin converting enzyme inhibitor; ARB, angiotensin receptor blocker; eGFR, estimated glomerular filtration rate; UACR, urine albumin to creatinine

ratio; n, number of patients with available data; Hb, hemoglobin; BNP, brain natriuretic peptide; EF, ejection fraction; LVEF, left ventricular ejection fraction; LVd, left ventricular diastolic diameter; LVMI, left ventricular mass index (corrected for body surface area); LAd, left atrium diameter; PAP, pulmonary arterial pressure; RAP, right atrial pressure; RV, right ventricular; RWMA, regional wall motion abnormalities. The Bonferroni correction for post-hoc tests was applied. †, $p < 0.05$ vs. control group 1; ¶, $p < 0.05$ vs. control group 2

Supplemental Table 2 Deaths, non-fatal myocardial infarctions (MI), and strokes in each patient group

Group	Deaths	Non-fatal MIs	Strokes
Acute cardiorenal	250/421 (59.4%)	40/146 (27.4%)	32/382 (8.4%)
Type 2 cardiorenal	4/10 (40.0%)	0/4 (0%)	0/8 (0%)
Type 4 cardiorenal	91/183 (49.7%)	21/97 (21.6%)	16/166 (9.6%)
Control group 1 (stable HF)	1077/3436 (31.3%)	338/2375 (14.2%)	151/3219 (4.7%)
Control group 2 (stable CKD)	1025/2768 (37.0%)	315/2406 (13.1%)	171/2615 (6.5%)